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A Portable, Battery Operated Fiber Optic Fluorimeter with Imaging Capability.

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The recent availability of small diameter, spatially coherent fiber bundles has led to the development of novel optical transduction schemes which provide for single optical fibers with multi-analyte sensing capability. We have designed and constructed a portable fluorimeter to support field applications of this rapidly emerging technology. The fluorimeter has been designed to incorporate the super bright, blue gallium nitride light emitting diode and the Texas Instruments TC255 frame transfer charge coupled device (CCD) image sensor. We will describe a man portable version (less than 30 lbs with computer) of the fluorimeter and give examples of its performance.

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